

IN THE CLAIMS:

Please amend the claims as follows:

1 - 31. (Presently Canceled).

- 32. (Original) An isolated nucleic acid molecule encoding a GB1 domain polypeptide which binds a Fab fragment of an IgG but does not bind a Fc fragment of an IgG.
- 33. (Original) The isolated nucleic acid molecule of claim 32, wherein the encoded polypeptide comprises an amino acid sequence selected from among SEQ ID NO's:6, 8, 10, 12, 14, 16, 18, 20, 22 and 24.
- 34. (Original) The isolated nucleic acid molecule of claim 33, further defined as comprising a GB1 domain polypeptide-encoding nucleic acid molecule selected from among SEQ ID NO's:5, 7, 9, 11, 15, 17, 19, 21 and 23.
- 35. (Original) The isolated nucleic acid molecule of claim 32, further defined as a DNA segment.
- 36. (Original) The isolated nucleic acid molecule of claim 32, further defined as positioned under the control of a promoter.
- 37. (Original) The isolated nucleic acid molecule of claim 32, further defined as a recombinant vector.
- 38. (Original) The isolated nucleic acid molecule of claim 37, wherein the vector is a recombinant expression vector.
- 39. (Original) A recombinant host cell comprising the isolated nucleic acid molecule of claim 32.
- 40. (Original) The recombinant host cell of claim 39, wherein the host cell is a procaryotic cell.
- 41. (Original) The recombinant host cell of claim 39, wherein the host cell is a eukaryotic cell.
- 42. (Original) A method of preparing a GB1 domain polypeptide which binds a Fab fragment of an IgG but does not bind a Fc fragment of an IgG, comprising: transforming a cell with isolated nucleic acid molecule of claim 32 to produce a GB1 domain polypeptide which binds a Fab fragment of an IgG but does not bind

a Fc fragment of an IgG under conditions suitable for the expression of the polypeptide.

43. (Original) A method for purifying Fc fragments of IgG's by affinity chromatography, the method comprising the steps of:
  - (a) contacting a sample comprising IgG Fc and Fab fragments with a GB1 polypeptide of claim 1, the GB1 domain polypeptide immobilized to a solid phase support, to immobilize the IgG Fab fragments to the solid phase support; and
  - (b) collecting the IgG Fc fragment remaining in the sample.
44. (Original) The method of claim 43, wherein the Fab and the Fc fragments are from an IgG from a warm-blooded vertebrate.
45. (Original) The method of claim 44, wherein the Fab and the Fc fragments are from an IgG from a mammal.
46. (Original) The method of claim 45, wherein the mammal is selected from the group consisting of human, mouse, pig, rat, ape, monkey, cat, guinea pig, cow, goat and horse.
47. (Original) A method for purifying Fab fragments of IgG's by affinity chromatography, the method comprising the steps of:
  - (a) contacting a sample comprising IgG Fc and Fab fragments with a GB1 polypeptide of claim 1, the GB1 polypeptide immobilized to a solid phase support, to immobilize the IgG Fab fragments to the solid phase support;
  - (b) collecting the IgG Fc fragment remaining in the sample; and
  - (c) eluting the IgG Fab fragments from the solid phase support to give purified IgG Fab fragments in the eluate.
48. (Original) The method of claim 47, wherein the IgG Fab fragments bound to the immobilized GB1 polypeptide are eluted by washing the solid phase support with a buffer of about pH 3.5 to about pH 2.4 to give the Fab fragments in the eluate.
49. (Original) The method of claim 47, wherein the Fab and the Fc fragments are from an IgG from a warm-blooded vertebrate.

50. (Original) The method of claim 49, wherein the Fab and the Fc fragments are from an IgG from a mammal.
51. (Original) The method of claim 50, wherein the mammal is selected from the group consisting of human, mouse, pig, rat, ape, monkey, cat, guinea pig, cow, goat and horse.
52. (Original) A method for detecting IgG, a fragment of an IgG, or combinations thereof, in a fluid sample suspected of containing IgG, a fragment of an IgG, or combinations thereof, the method comprising the steps of:
- (a) contacting the fluid sample with a binding substance comprising the GB1 polypeptide of claim 1, under conditions favorable to binding of IgG, a fragment of an IgG, or combinations thereof to the binding substance to form a complex therebetween; and
  - (b) detecting the complex by means of a label conjugated to the binding substance or by means of a labeled reagent that specifically binds to the complex subsequent to its formation.
53. (Original) The method of claim 52, wherein the binding substance is conjugated with a detectable label and wherein detecting step (b) comprises:
- i) separating the complex from unbound labeled binding substance; and
  - ii) detecting the detectable label which is present in the complex or which is unbound.
54. (Original) The method of claim 53, wherein the fragments of the IgG are Fab and the Fc fragments are from an IgG from a warm-blooded vertebrate.
55. (Original) The method of claim 54, wherein the Fab and the Fc fragments are from an IgG from a mammal.
56. (Original) The method of claim 55, wherein the mammal is selected from the group consisting of human, mouse, pig, rat, ape, monkey, cat, guinea pig, cow, goat and horse.